

METHOD AND APPARATUS FOR PREDICTING
A FUEL INJECTOR TIP TEMPERATURE

ABSTRACT

Methods and apparatus for accurately predicting a fuel injector tip temperature (FITT) are described. One technique for predicting the temperature of a fuel injector tip in an engine suitably includes the steps of
5 estimating an initial temperature of the fuel injector tip and calculating a steady state temperature of the fuel injector tip. A filter coefficient is determined as a function of a rate of airflow into the engine, and the temperature of the fuel injector tip is predicted as a function of said initial temperature, the steady state temperature, and the filter coefficient. In a
10 further embodiment, the steady state temperature is filtered into a feedback temperature at a rate that is determined by the filter coefficient.